

METHOD FOR MULTI-DEPTH TRENCH ISOLATION

ABSTRACT OF THE DISCLOSURE

A method for forming multi-depth apertures in a substrate is provided. The method
5 includes first providing a pad stack atop a surface of a substrate having regions for
forming apertures therein, the pad stack includes at least a top patterned masking layer.
Next, at least one of the regions of the substrate is blocked with a first block mask, while
leaving at least one other region of the substrate unblocked. A plurality of first apertures
having a first depth is then formed in the unblocked region of the substrate using the
10 patterned masking layer to define the plurality of first apertures. The first block mask is
then removed; and thereafter a plurality of second apertures having a second depth is
formed in regions of the substrate that were previously blocked by the first block mask
using the same patterned masking layer to define the second apertures, while
simultaneously increasing the first depth such that the first depth is deeper than the
15 second depth.